The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for testing comprising:

irradiating a visible light on a surface of a semiconductor film, the semiconductor film having a crystallinity that has been improved by irradiating an energy beam;

photographing a scattered light of the irradiated visible light to produce a digital image,

wherein a direction in which the energy beam is scanned is a Y direction, and a direction perpendicular to the Y direction is an X direction in the digital image;

sectioning basic units comprising m rows and n columns by dividing the digital image into the n columns in the X direction and the m rows in the Y direction in a predetermined analysis range in the digital image;

calculating average values of corrected saturations of n basic units aligned in the X direction per the m rows aligned in the Y direction; and

obtaining an approximate line from relations between positions in the Y direction and the average values of corrected saturations corresponding to the positions in the Y direction; and

comparing a ~~variance~~ fluctuation obtained from relations between the approximate line and the average values of corrected saturations with a reference value which is determined for a demanded performance of the semiconductor element in order to evaluate the crystallinity of the semiconductor film having the crystallinity that has been improved.

2. (Canceled)

3. (Currently Amended) A method for testing comprising:

irradiating a visible light on a surface of a semiconductor film, the semiconductor film having a crystallinity that has been improved by irradiating an energy beam;

photographing a scattered light of the irradiated visible light to produce a digital image,

wherein a direction in which the energy beam is scanned is a Y direction, and a direction perpendicular to the Y direction is an X direction in the digital image;

sectioning basic units comprising m rows and n columns by dividing the digital image into the n columns in the X direction and the m rows in the Y direction in a predetermined analysis range in the digital image;

calculating average values of luminances of n basic units aligned in the X direction per the m rows aligned in the Y direction;

obtaining an approximate line from relations between positions in the Y direction and the average values of luminances corresponding to the positions in the Y direction; and

comparing a ~~variance~~ fluctuation obtained from relations between the approximate line and the average values of luminances with a reference value which is determined for a demanded performance of the semiconductor element in order to evaluate the crystallinity of the semiconductor film having the crystallinity that has been improved.

4.-10. (Canceled)

11. (Currently Amended) The method for testing according to claim 1, further comprising:

calculating average values of luminances of n basic units aligned in the X direction per the m rows aligned in the Y direction;

obtaining an approximate line from relations between positions in the Y direction and the average values of luminances corresponding to the positions in the Y direction; and

comparing a variance obtained from relations of the approximate line and the average values of the luminances with a reference value to evaluate ~~the crystallinity~~ the crystallinity of the semiconductor film having the crystallinity that has been improved.

12.-17. (Canceled)

18. (Previously Presented) The method for testing according to claim 3,

wherein the crystallinity of the semiconductor film is tested by further using an average corrected saturation in the digital image.

19.-25. (Canceled)

26. (Currently Amended) A method for testing a beam profile comprising:

irradiating one pulse of an energy beam on a substrate over which an amorphous semiconductor film is formed;

irradiating a visible light on a surface of the substrate and photographing scattered light of the irradiated visible light to produce a digital image,

wherein a direction in which the energy beam is scanned is a Y direction, and a direction perpendicular to the Y direction is an X direction in the digital image;

sectioning basic units comprising m rows and n columns by dividing the digital image into the n columns in the X direction and the m rows in the Y direction in a predetermined analysis range in the digital image;

calculating average values of corrected saturations of n basic units aligned in the X direction per the m rows aligned in the Y direction;

obtaining an approximate line from relations between positions in the Y direction and the average values of corrected saturations corresponding to the positions in the Y direction; and

comparing a ~~variance~~ fluctuation obtained from relations between the approximate line and the average values of corrected saturations with a reference value which is determined for a demanded performance of the semiconductor element in order to evaluate [[the]] a crystallinity of the semiconductor film having [[the]] crystallinity that has been improved.

27. (Canceled)

28. (Currently Amended) A method for testing a beam profile comprising:

irradiating one pulse of an energy beam on a substrate over which an amorphous semiconductor film is formed;

irradiating a visible light on a surface of the substrate and photographing scattered light of the irradiated visible light to produce a digital image; and

wherein a direction in which the energy beam is scanned is a Y direction, and a direction perpendicular to the Y direction is an X direction in the digital image;

sectioning basic units consisting of m rows and n columns by dividing the digital image into the n columns in the X direction and the m rows in the Y direction in a predetermined analysis range in the digital image;

calculating average values of luminances of n basic units aligned in the X direction per the m rows aligned in the Y direction;

obtaining an approximate line from relations between positions in the Y direction and the average values of luminances corresponding to the positions in the Y direction; and

comparing a ~~variance~~ fluctuation obtained from relations between the approximate line and the average values of luminances with a reference value which is

determined for a demanded performance of the semiconductor element in order to evaluate [[the]] a crystallinity of the semiconductor film having [[the]] crystallinity that has been improved.

29.-31. (Canceled)

32. (Original) The method for testing according to claim 1, wherein the energy beam is a laser light.

33. (Canceled)

34. (Original) The method for testing according to claim 3, wherein the energy beam is a laser light.

35.-36. (Canceled)

37. (Previously Presented) The method for testing according to claim 1, wherein the visible light is irradiated from a light source selected from the group consisting of a metal halide lamp, a halogen lamp, a tungsten lamp, a xenon lamp, a light emitting diode, and a fluorescent lamp.

38. (Canceled)

39. (Previously Presented) The method for testing according to claim 3, wherein the visible light is irradiated from a light source selected from the group consisting of a metal halide lamp, a halogen lamp, a tungsten lamp, a xenon lamp, a light emitting diode, and a fluorescent lamp.

40.-41. (Canceled)

42. (Previously Presented) The method for testing according to claim 26, wherein the visible light is irradiated from a light source selected from the group consisting of a metal halide lamp, a halogen lamp, a tungsten lamp, a xenon lamp, a light emitting diode, and a fluorescent lamp.

43. (Canceled)

44. (Previously Presented) The method for testing according to claim 28, wherein the visible light is irradiated from a light source selected from the group consisting of a metal halide lamp, a halogen lamp, a tungsten lamp, a xenon lamp, a light emitting diode, and a fluorescent lamp.

45. (Previously Presented) The method for testing according to claim 1, wherein an illumination intensity of the visible light irradiating on a surface of the semiconductor film is 10,000 lux or more.

46. (Canceled)

47. (Previously Presented) The method for testing according to claim 3, wherein an illumination intensity of the visible light irradiating on a surface of the semiconductor film is 10,000 lux or more.

48.-49. (Canceled)

50. (Previously Presented) The method for testing according to claim 26, wherein an illumination intensity of the visible light irradiating on a surface of the semiconductor film is 10,000 lux or more.

51. (Canceled)

52. (Previously Presented) The method for testing according to claim 28, wherein an illumination intensity of the visible light irradiating on a surface of the semiconductor film is 10,000 lux or more.

53. (Original) The method for testing according to claim 45, wherein the illumination intensity is from 20,000 to 100,000 lux.

54. (Canceled)

55. (Original) The method for testing according to claim 47, wherein the illumination intensity is from 20,000 to 100,000 lux.

56.-57. (Canceled)

58. (Original) The method for testing according to claim 50, wherein the illumination intensity is from 20,000 to 100,000 lux.

59. (Canceled)

60. (Original) The method for testing according to claim 52, wherein the illumination intensity is from 20,000 to 100,000 lux.

61.-68. (Canceled)

69. (Currently Amended) A manufacturing method of a semiconductor device, comprising:

testing each of a plurality of semiconductor films crystallized by an energy beam having [[a]] different ~~density~~ densities by the method for testing according to claim 1; and

determining an irradiation energy density by a result of ~~a test~~ the testing to crystallize the semiconductor film.

70. (Canceled)

71. (Currently Amended) A manufacturing method of a semiconductor device, comprising:

testing each of a plurality of semiconductor films crystallized by an energy beam having [[a]] different ~~density~~ densities by the method for testing according to claim 3; and

determining an irradiation energy density by a result of ~~a test~~ the testing to crystallize the semiconductor film.

72.-73. (Canceled)

74. (Currently Amended) A manufacturing method of a semiconductor device, comprising:

testing each of a plurality of semiconductor films crystallized by an energy beam having [[a]] different ~~density~~ densities by the method for testing according to claim 26; and

determining an irradiation energy density by a result of ~~a test~~ the testing to crystallize the semiconductor film.

75. (Canceled)

76. (Currently Amended) A manufacturing method of a semiconductor device, comprising:

testing each of a plurality of semiconductor films crystallized by an energy beam having [[a]] different ~~density~~ densities by the method for testing according to claim 28; and

determining an irradiation energy density by a result of ~~a test~~ the testing to crystallize the semiconductor film.

77. (Original) The manufacturing method according to claim 69, wherein a means for photographing the scattered light is provided in a crystallization chamber.

78. (Canceled)

79. (Original) The manufacturing method according to claim 71, wherein a means for photographing the scattered light is provided in a crystallization chamber.

80.-81. (Canceled)

82. (Original) The manufacturing method according to claim 74, wherein a means for photographing the scattered light is provided in a crystallization chamber.

83.-85. (Canceled)